

# **Strengthening Collaborations: ORNL's Experience**

Presented to

**Workshop on National Laboratories  
and Universities:  
Building New Ways to Work Together**

by  
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# **ORNL collaboration with universities is strong and growing stronger**

- **Our long-standing relationship with the University of Tennessee has expanded under UT-Battelle**
- **Regional partnerships strengthen ORNL**
  - **Oak Ridge Associated Universities (ORAU)**
  - **UT-Battelle core universities: Duke, Florida State, Georgia Tech, North Carolina State, Virginia, Virginia Tech**
  - **New relationships with HBCUs/MEIs**



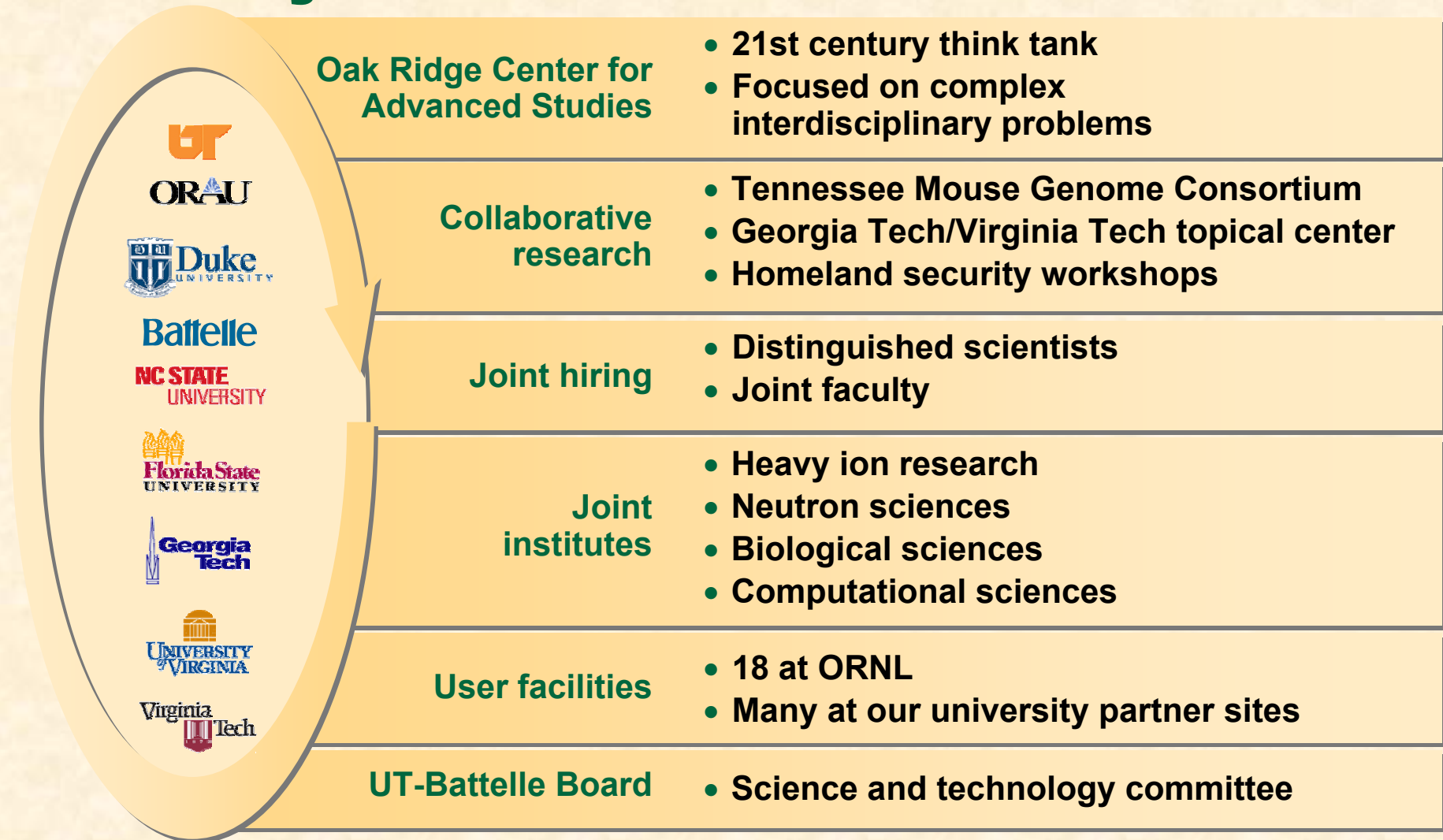
# **ORNL has made a formal commitment to university partnerships**

**We will**

- **strengthen our role in the nation's research enterprise**
- **increase the quality and impact of our user facilities and S&T programs**
- **enhance our contributions to science education**

**by building broad partnerships with the nation's research universities**

# Our partnerships span a variety of activities



# These partnerships are creating new opportunities

- State-funded facilities at ORNL will host university researchers
- Workshops are building the research community for neutron scattering
- Georgia Tech played a key role in ORNL's successful proposal for a nanoscale science research center
- Core universities are contributing to the growth of high-performance computing at ORNL





# Our experience provides insight for addressing key issues

- Inclusive collaborations with universities
- Shortage of S&T graduates in critical skills areas
- Shortage of minority scientists and engineers
- Cost differentials between laboratories and universities
- Security and scientific vitality



# Inclusive collaborations with universities

## Issue

- Universities need enhanced access to national labs
  - Planning
  - Participation in major research initiatives

## Solution

- ORAU, UT-Battelle core universities, and regional partnerships offer examples

## Responsibility/Path Forward

Share best practices

# Shortage of S&T graduates in critical skills areas

## Issue

- Fields such as radiochemistry and nuclear engineering are not producing enough graduates to meet national needs
- Programs exist at various federal agencies (DOE, DoD, DTRA, NASA, ...), but they are not coordinated

## Solution

- Coordinated, multi-agency effort to grow these areas through subsidized graduate program scholarships
- Coupled national laboratory programs to provide research projects, facilities, and future opportunities to these graduates

## Responsibility/Path Forward

This meeting is a start to see if there are solutions that can be agreed upon



# Shortage of S&T graduates in critical skills areas (continued)

## Issue

- Agency-supported graduate programs have either disappeared or been subjected to changing accounting rules (e.g., direct versus indirect charging rule changes)
- Lack of constancy in support has hurt credibility of these programs

## Solution

- Prioritized programs with constant funding

## Responsibility/Path Forward

## Recommendation to relevant agencies

# Shortage of minority scientists and engineers

## Issue

- Too few minority scientists and engineers are graduating in S&T critical skills areas

## Solution

- Use university–national lab partnerships to provide research projects, facilities, and future opportunities to these graduates

## Responsibility/Path Forward

Labs and universities should adopt best practices from each other

# Cost differentials between laboratories and universities

## Issue

- Cost differentials are an impediment to collaborations

## Solution

- Joint institutes can offer an accounting path solution

## Responsibility/Path Forward

Share best practices

# Security and scientific vitality

## Issue

- New security regulations in the aftermath of 9/11 are affecting the critical skill supply
  - Delays in processing of visa applications
  - More indices checks required

## Solution

- Recommend that the State Department accelerate processing of critical skill applicants

## Responsibility/Path Forward

Recommendation from this meeting